

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (original): A method for enhancing hematopoiesis, comprising:  
transplanting at least a therapeutically effective portion of a vascular tissue into a subject,  
wherein the vascular tissue enhances hematopoiesis.

Claim 2 (original): The method of claim 1, wherein the isolated vascular tissue is  
autologous vascular tissue.

Claim 3 (original): The method of claim 1, wherein the isolated vascular tissue is  
heterologous vascular tissue.

Claim 4 (original): The method of claim 1, wherein the subject is deficient in  
hematopoiesis.

Claim 5 (original): The method of claim 1, wherein the subject is deficient in  
hematopoiesis due to a genetic immunodeficiency, irradiation, chemotherapy, or neutropenia.

Claim 6 (original): The method of claim 1, wherein the portion of the isolated vascular  
tissue is a portion of an artery or a vein.

Claim 7 (currently amended): The method of claim 1, wherein the portion of the isolated  
vascular tissue is a portion of a vena cava, a thoracic aorta, a smaller artery, a smaller vein, or a  
~~capillaries~~ capillary of a microvascular circulation.

Claim 8 (currently amended): The method of claim 1, wherein ~~hematopoesis~~  
hematopoiesis is enhanced by a cell or factor provided by the transplanted vascular tissue.

Claim 9 (original): The method of claim 1, wherein the subject is a mammalian subject.

Claim 10 (original): The method of claim 9, wherein the subject is a mouse, a human, a monkey, a cow, a pig, a sheep, a rat, or a rabbit.

Claim 11 (original): A method for detecting an agent that affects hematopoiesis, comprising transplanting a portion of an isolated vascular tissue into a subject, wherein the portion of the isolated vascular tissue is sufficient to enhance hematopoiesis; treating the vascular tissue with an agent; detecting hematopoiesis in the subject; and comparing hematopoiesis in the subject with hematopoiesis in a control subject, wherein a change in the hematopoiesis in the subject as compared to the control is indicative that the agent affects hematopoiesis.

Claim 12 (original): The method of claim 11, wherein the change in hematopoiesis is a decrease in hematopoiesis, and wherein the agent interferes with hematopoiesis.

Claim 13 (original): The method of claim 11, wherein the change in hematopoiesis is an increase in hematopoiesis, and wherein the agent augments hematopoiesis.

Claim 14 (original): The method of claim 11, wherein the treatment of the vascular tissue occurs prior to the transplantation of the vascular tissue in the subject.

Claim 15 (original): The method of claim 11, wherein the treatment of the vascular tissue occurs after the transplantation of the blood vessel into the subject.

Claim 16 (original): A method for isolating a hematopoietic growth factor, comprising transplanting a portion of a vascular tissue into a subject, wherein the portion of the vascular tissue promotes hematopoiesis in the subject; and isolating a growth factor from the subject, wherein the growth factor is a hematopoietic growth factor.

Claim 17 (original): The method of claim 16, wherein the subject is a mammal.

Claim 18 (original): The method of claim 16, wherein the vascular tissue is a portion of an artery or a vein.

Claim 19 (original): The method of claim 16, wherein the vascular tissue is a portion of a vena cava, a thoracic aorta, a smaller arteries a smaller vein, a capillary, or a capillary of a microvascular circulation.

Claim 20 (original): A method for isolating a hematopoietic stem cell, comprising transplanting a portion of a vascular tissue into a subject, isolating a hematopoietic stem cell from the subject.

Claim 21 (original): A pharmaceutical composition for promoting hematopoiesis, comprising a therapeutically effective amount of an isolated vascular tissue in a pharmaceutically acceptable carrier.

Claim 22 (currently amended): The composition of claim 21, wherein the vascular tissue is a portion of a vena cava, a thoracic aorta, a thoracic aorta, or smaller artery, a smaller vein, or a ~~capillaries~~ capillary of a microvascular circulation.

Claim 23-26 (canceled).

Claim 27 (original): A method of making a pharmaceutical, comprising obtaining a portion of a vascular tissue for use in enhancing hematopoiesis.

Claim 28 (original): A non-human animal model for testing agents that affect hematopoiesis, comprising a non-human animal deficient for hematopoiesis transplanted with an isolated portion of a vascular tissue, wherein the portion of the vascular tissue is sufficient to promote hematopoiesis.

Claim 29 (currently amended): The non-human animal model of claim 28, wherein the non-human animal is ~~deficient~~ deficient in hematopoiesis as a result of ~~irradiation~~ irradiation.

Claim 30 (currently amended): The non-human animal model of claim 28, wherein the non-human animal is ~~deficient~~ deficient in hematopoiesis as a result of a genetic disorder.

Claim 31 (original): A method for generating a non-human animal model for testing agents that affect hematopoiesis, comprising treating the non-human animal of claim 28 with the agent; detecting a population of lymphocytes in the treated, non-human mammal; and comparing the population of lymphocytes in the treated non-human mammal with the population of lymphocytes in a control non-human animal; wherein an effect on the population of lymphocytes indicates an effect on hematopoiesis.

Claim 32 (original): The method of claim 31, wherein the change is an increase in the population of lymphocytes and the effect is an enhancement of hematopoiesis.

Claim 33 (currently amended): The method of claim 31, wherein the change is a decrease in the population of lymphocytes and the effect is [a] an inhibition of hematopoiesis.

Claim 34 (original): A hematopoietic stem cell isolated using the animal model of claim 31.

Claim 35 (original): A growth factor isolated using the animal model of claim 31, wherein the growth factor affects hematopoiesis.

Claim 36 (original): The growth factor of claim 31, wherein the growth factor affects hematopoietic stem cells.

Claim 37 (original): The method of claim 1, wherein the vascular tissue is transplanted under the kidney capsule.

Claim 38 (original): The method of claim 1, wherein the vascular tissue is transplanted intraperitoneally or subcutaneously.

Claim 39 (original): The method of claim 1, wherein the vascular tissue does not form an enclosed lumen.

Claim 40 (original): The method of claim 1, further comprising assaying hematopoiesis in a sample from the subject.

Claim 41 (original): The method of claim 11, wherein the vascular tissue is transplanted under the kidney capsule.

Claim 42 (currently amended): The method of claim 11, wherein the vascular tissue is transplanted ~~or~~ intraperitoneally or subcutaneously.

Claim 43 (original): The method of claim 11, wherein the vascular tissue does not form an enclosed lumen.

Claim 44 (original): The method of claim 20, wherein the vascular tissue is at least a portion of an artery or vein.

Claim 45 (original): The method of claim 20, wherein the subject is a non-human animal subject.

Claim 46 (original): The method of claim 31, wherein the vascular tissue is transplanted under the kidney capsule, intraperitoneally, or subcutaneously.